Policy and horizontal mergers

Ideally, to evaluate a merger, we would want:

1] Demand structure (elasticities, quality differences)
2] Cost structure
3] Accurate behavioral assumptions
4] Changes in behavior, entry decisions, etc

- However, we don't have most of this. Merger simulations do some of this. (focus mostly on the demand structure.)

Typically, mergers look like:

- 1996 office Depot / Staples proposed mergers
  - They were two of three office supply superstores. (merger ⇒ high concentration)
    - Is this the right definition of a market?
  - OD/Staples, "there are many competitors for the products we sell."
  - Ultimately, this merger was killed by the anti-trust authorities.

Merger Law:

- Clayton antitrust act and FTC act (1914)
  - pre-merger notification requirement. (since 1976)
    - Hart-Scott-Rodino
- Prior to this: scrambled eggs problem. Merge and mix things up quickly to prevent reversibility

- FTC specializes in, say, health care
- DOJ deals with, among other things, electricity mergers.

1982: horizontal merger guidelines

- Three cases:
  - "go ahead" - most common
  - approval with conditions (eg. divest retail gas stations)
    - can be fought in court - almost always lose, though
    - courts follow case law, not merger guidelines.
  - not approved

---

allows us to define mkt share { Define the relevant markets { product, geographic } not always easy to measure

⇓

calculate pre-merger HHI

⇓

check post-merger HHI and ΔHHI

⇓

ease of entry?
ease of collusion?
cost efficiencies?

⇙ approval ⇘ injunction

approval in some cases ⇐

- Defining markets is really difficult sometimes.

Principle of DOJ guidelines

- Hypothetical mononopoly test to define markets
  - is the demand "curve" sufficiently inelastic?
  - empirically, this is pretty imprecise
  - Find critical elasticity. Want to choose this so that there are "enough" but not "too many" substitutes.

- p^0 - pre-merger price
- $p^1 - p^0$ + specified price increase
- p^m - price for hypothetical monopolist
- c - sr mc (assumed to be zero)
- m - pre-merger cost margin: $\frac{p^0 - c}{p^0}$
- t - minimum price in $\frac{p^1 - p^0}{p^0}$ deemed significant

Isoelastic dmd: $\frac{1+t}{m+t}$

Linear demand: $\frac{1}{m+2t}$

} critical elasticity

	m = 0	m = 40	m = 60	m = 70
Linear	10	2	1.43	1.25
Isoelastic	21	2.33	1.91	1.40

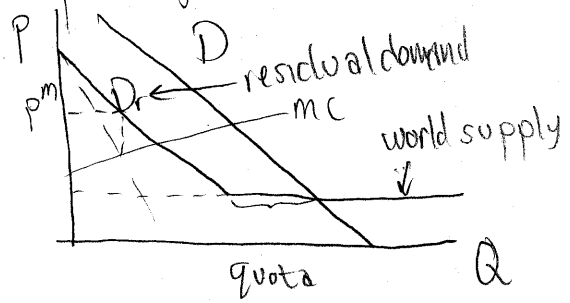
- Difficult to implement this in practice
  - might as well estimate entire demand system

- what if you already have a duopoly that has occasional price wars? which price is relevant

Geography matters:

- is gas in Providence a substitute for gas in Boston?
- it is easy to determine what is clearly "out" of the market
- Basic focus is on transportation and transaction costs. (also trade barriers for international markets)
  - where are arbitrage constraints binding?
  - $|p_2 - p_1| \leq t$ (transportation / transaction costs)
  - typically assume t is perfectly elastic
    - not a good assumption for, say, electricity markets during peak time

Importing:



- have to take import quotas into account

approaches:

1] Elzinga and Hogarty:
- x = local consumption of local production
- y = local production (total)
- y' = total local consumption

$\frac{x}{y}$, $\frac{x}{y'}$ close to one $\Rightarrow$ small, local mkts

- What about Florida Oranges?
  - $\frac{x}{y}$ very small
  - $\frac{x}{y'}$ one

2] Stigler and Sherwin
- Measure correlation of prices
  - problem: common demand and supply shocks. Must somehow control for this.

3] Spiller/Wang:
- $|p_1^A - p_2^A| < T \Rightarrow$ separate markets
- $|p_1^A - p_2^A| > T \Rightarrow$ arbitrage $\Rightarrow |p_1^A - p_2| = T$
- measure how often $|p_1^A - p_2^A| = T$

Why are HHI's important?
- Stigler "The Theory of Oligopoly"
  - HHI ↑ $\Rightarrow$ collusion ↑
- Cournot: Lerner index: $\frac{H}{\varepsilon}$ (ie ε is important as well.)

Originally, the DOJ wanted to take account the change in ease-of-entry.
- Now, entry needs to be very quick and very substantial

Efficiencies (Williamson trade-off) are taken into account in the guidelines. (not quite) These are not very easy to demonstrate.